

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P-2678-WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/50854	International filing date (day/month/year) 20.11.2003	Priority date (day/month/year) 20.11.2002
International Patent Classification (IPC) or both national classification and IPC G01N25/18		
Applicant THE EUROPEAN COMMUNITY et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 29.04.2004	Date of completion of this report 13.01.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Thomte, M. Telephone No. +49 89 2399-2610 

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International application No. **PCT/EP 03/50854**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-11 as originally filed

Drawings, Sheets

1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1,10,11
Inventive step (IS)	Yes: Claims	
	No: Claims	2-9
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations

see separate sheet

ad Section V

1. In this report reference is made to the following documents:

D1: US-A-5 713 665 (KATO HIDEYUKI ET AL) 3 February 1998 (1998-02-03)

D2: THOMAS S ET AL: "THERMAL DIFFUSIVITY OF SOLIDS BY
PHOTOACOUSTIC CELL ROTATION AND PHASE LAG MEASUREMENT"
REVIEW OF SCIENTIFIC INSTRUMENTS, AMERICAN INSTITUTE OF
PHYSICS. NEW YORK, US, vol. 66, no. 7, 1 July 1995, pages 3907-3908.

2. The object of the present invention is to provide a method (Claim 1) and an system (Claim 10) for measuring the thermal diffusivity of a sample. In doing so the method of the present application suggests that the sample is irradiated with a modulated heating source and a first a signal thereof is provided; thereafter a second signal proportional to the temperature of the heated spot or sample area is extracted whereafter the phase difference between said signals are used to determine the thermal diffusivity of the sample.

However, the provision of calculating the diffusivity in this manner is already known in the art - see the Abstract of document D1, or, document D2 - see fig. 1 with the text belonging to it - where the temperature of the front side of the sample holder is considered as the first signal whereas the temperature of the rear surface is representing the second signal and a phase difference between said signals is calculated which difference is taken into consideration when arriving at a measure of the thermal diffusivity sought.

Hence, as far as it can be understood the method of claim 1 is prior published implying that said claim does not fulfill the requirements of Article 33(2) PCT as to novelty. The same objection applies to the system of independent claim 10, as well as to dependent claim 11, mutatis mutandis.

3. The provision of selecting the exact place of measuring the temperature on the sample as defined in claim 2 or, using a previously determined sample as a reference - as suggested in claim 3 - cannot be considered as anything else than straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed. Hence, said claims do not fulfill the requirements of article 33(3) PCT as to inventive step.

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4. The remaining dependent method claims 4 - 9 seem to relate to mere design modifications, consequential features of the basic measuring method of claim 1, or conventional features, and thus do not appear to add anything inventive to this claim (Article 33(3) PCT).
5. If the application is pursued in a national or in a regional phase, then the following matters should also be borne in mind:
 - (i) It is not at present apparent which part of the application could serve as a basis for a new claim which fulfils the requirement of Article 33(3) PCT as to inventive step. Should the applicant nevertheless regard some particular matter as patentable, an independent claim should be filed. The applicant should also indicate - preferably already in a letter accompanying a regional or national application - the difference of the subject-matter of the new claim vis-à-vis the state of the art (ie. D1 and D2) and the significance thereof.
 - (ii) Any new independent claim to be filed should be split in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
 - (iii) Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.
 - (iv) A document reflecting the prior art described on page 1 is not identified in the description (Rule 5.1(a)(ii) PCT).